

Patent No. 5,832,379 (hereinafter "Mallinckrodt"), and rejected claims 22-24 and 46 under §103(a) as being unpatentable over Edler in view of allegedly admitted prior art.

In this response, Applicants traverse the §102(e) and §103(a) rejections. Applicants respectfully request reconsideration of the present application in view of the following remarks.

With regard to the §102(e) rejection, Applicants note that the Manual of Patent Examining Procedure (MPEP), Eight Edition, August 2001, §2131, specifies that a given claim is anticipated "only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference," citing Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Moreover, MPEP §2131 indicates that the cited reference must show the "identical invention . . . in as complete detail as is contained in the . . . claim," citing Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

For the reasons identified below, Applicants submit that the Examiner has failed to establish anticipation of at least independent claims 1, 8, 19, 25, 32 and 43 by the Edler reference.

Each of independent claims 1, 8, 19, 25, 32 and 43 includes limitations relating to the communication of first and second representations of a signal that includes a first component and a second component. The first representation contains first information concerning at least the first component, and second information concerning at least one coefficient for predicting the second component based on the first information. The second representation contains third information concerning at least the second component, and fourth information concerning at least one coefficient for predicting the first component based on the third information.

In an example of an illustrative embodiment of the invention falling within the above-noted limitations, the first and second representations are referred to as D1 and D2 representations, respectively. The D1 representation in this embodiment contains: (i) information concerning a left channel signal L of an analog stereo audio signal, and (ii) parametric information concerning a right channel signal R of the analog stereo audio signal. The D2 representation in this embodiment contains: (i) information concerning R, and (ii) parametric information concerning L. See the specification at, for example, page 5, line 24 to page 6, line 25. It should be noted that this example is presented herein in order to illustrate one possible embodiment of the invention that falls within

the above-noted claim limitations. Applicants are not suggesting that any of the claims include as limitations the particular features of this illustrative embodiment.

3 Applicants respectfully submit that the Edler reference fails to teach or suggest the above-noted limitations of the independent claims relating to first and second representations of a signal  
5 that includes a first component and a second component.

The Examiner in formulating the §102(e) rejection argues that a dual-channel stereo version  
7 of the Edler encoding system utilizing predictor circuit 43 of FIG. 1 meets these limitations. More particularly, the Examiner in effect argues that the first and second components of the signal referred  
9 to in the claims correspond to the respective left and right channel signals  $x_l(n)$  and  $x_r(n)$  in FIG. 1a of Edler, and that the first and second representations of the signal correspond to the respective  
11 prediction error signals  $\tilde{e}_l(n)$  and  $\tilde{e}_r(n)$  at the output of the encoder in FIG. 1a.

Contrary to the implication that the Examiner attempts to draw at page 12, last paragraph,  
13 of the final Office Action, Applicants do not agree in any way that this correspondence is correct.

However, if one were to assume, for purposes of argument only, that this alleged correspondence  
15 between the claim elements and elements of Edler is correct, other aspects of the claim limitations are then clearly not met. The fact that other aspects of the claim limitations are not met serves as an  
17 indication that the correspondence alleged by the Examiner is actually incorrect. For example, the prediction error signal  $\tilde{e}_l(n)$  in FIG. 1a is not described in Edler as containing separately-  
19 identifiable pieces of information, namely, first information concerning at least the first component and second information concerning at least one coefficient for predicting the second component  
21 based on the first information. Applicants submit that there is no such separately-identifiable first and second information in the prediction error signal  $\tilde{e}_l(n)$ . Similarly, the prediction error signal  
23  $\tilde{e}_r(n)$  in FIG. 1a is not described in Edler as containing separately-identifiable pieces of information, namely, third information concerning at least the second component, and fourth information  
25 concerning at least one coefficient for predicting the first component based on the third information. Again, Applicants submit that there is no such separately-identifiable third and fourth information  
27 in the prediction error signal  $\tilde{e}_r(n)$ .

The position of Applicants as outlined above is made further apparent from the fact that the prediction error signals  $\tilde{e}_l(n)$  and  $\tilde{e}_r(n)$  in FIG. 1a of Edler are not denoted therein as vectors, but are instead apparently one-dimensional signals, each having only a single identifiable information component for a given instance of the sampling time  $n$ .

The Examiner at page 13, first full paragraph, of the final Office Action argues that the claims do not require “separately-identifiable pieces” of information in the first and second representations. However, the claims specify that the first representation contains first information concerning at least the first component, and second information concerning at least one coefficient for predicting the second component based on the first information. Since the claims thus require that the first representation contains both first information and second information, and that the first and second information have different characteristics relative to one another, the claims in effect specify that the first information and the second information are separately identifiable as such within the first representation. Similarly, the claims specify that the second representation contains third information concerning at least the second component, and fourth information concerning at least one coefficient for predicting the first component based on the third information. Since the claims thus require that the second representation contains both third information and fourth information, and that the third and fourth information have different characteristics relative to one another, the claims in effect specify that the third information and the fourth information are separately identifiable as such within the second representation.

The Examiner, in attempting to argue anticipation without showing a first representation that contains both first information and second information as claimed, and a second representation that contains both third information and fourth information as claimed, is failing to give appropriate patentable weight to all claim limitations. This is improper.

The Examiner attempts to justify this failure to give appropriate patentable weight to all claim limitations by arguing on page 13, first full paragraph, of the final Office Action that the limitations in question are met because Edler is able “to obtain the same prediction output signal from the transmitted signal.” Again, even if were to assume, for purposes of argument only, that this characterization of Edler is correct, it does not relieve the Examiner from the burden of showing that “each and every element” of a given claim is disclosed in Edler.

With regard to the use of vector notation in Edler, Applicants note that Edler explicitly uses vector notation to describe certain signals, in column 4, lines 3-24, but in the associated equations shows the N-channel generalized case of the prediction error signals  $\tilde{e}_l(n)$  and  $\tilde{e}_r(n)$  as one-dimensional elements of such vector signals. This strongly suggests that the prediction error signals  $\tilde{e}_l(n)$  and  $\tilde{e}_r(n)$  in Edler are not vector signals.

In view of the foregoing, Applicants respectfully submit that Edler fails teach or suggest each and every element of each of the independent claims, in as complete detail as is contained in those claims, as is required by MPEP §2131.

Since Edler fails to teach or suggest the limitations of each of independent claims 1, 8, 19, 25, 32 and 43, these claims are not anticipated by Edler.

The Mallinckrodt reference and the allegedly admitted prior art fail to supplement the above-noted fundamental deficiencies of Edler as applied to the independent claims.

Dependent claims 2-7, 9-18, 20-24, 26-31, 33-42 and 44-46 are believed allowable at least by virtue of their dependence from their respective independent claims. One or more of these claims are also believed to define additional separately-patentable subject matter relative to Edler and the other art of record, taken singly or in combination.

Moreover, with regard to the §103(a) rejections, Applicants note that a proper *prima facie* case of obviousness requires that the cited references when combined must “teach or suggest all the claim limitations,” and that there be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine the references or to modify the reference teachings. See MPEP, Eighth Edition, August 2001, §706.02(j).

Applicants submit that the Examiner has failed to establish a proper *prima facie* case of obviousness in the present §103(a) rejections, in that the cited references, even if assumed to be combinable, fail to teach or suggest all the claim limitations, and in that no cogent motivation has been identified for combining the references or modifying the reference teachings to reach the claimed invention.

The Federal Circuit has stated that when patentability turns on the question of obviousness, the obviousness determination “must be based on objective evidence of record” and that “this precedent has been reinforced in myriad decisions, and cannot be dispensed with.” In re Sang-Su Lee, 277 F.3d 1338, 1343 (Fed. Cir. 2002). Moreover, the Federal Circuit has stated that “conclusory statements” by an examiner fail to adequately address the factual question of motivation, which is material to patentability and cannot be resolved “on subjective belief and unknown authority.” Id. at 1343-1344.

There has been no showing in the present §103(a) rejection of objective evidence of record that would motivate one skilled in the art to combine references or to modify the proposed combination of references to produce the particular limitations in question.

For example, with regard to motivation to combine Edler and Mallinckrodt, the Examiner provides the following statement at page 8, last paragraph, to page 9, first paragraph, of the final Office Action, with emphasis supplied:

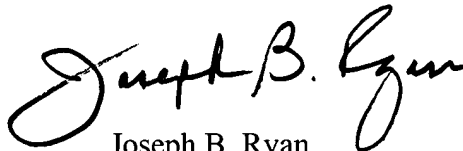
To one of ordinary skill in the art at the time the invention was made, it would have been obvious to include a signal quality monitoring and compensation system as taught by Mallinckrodt in the decoder component of the system of Edler. The motivation behind such a modification would have been that such a selection scheme would have provided an intelligent, structured approach to constructing the best possible representation of an original input audio system.

Applicants submit that this passage fails to provide the requisite motivation for the proposed combination. The above-quoted statement of obviousness given by the Examiner in the final Office Action is believed to be precisely the type of subjective, conclusory statement that the Federal Circuit has indicated provides insufficient support for an obviousness rejection. It appears, in view of the above-quoted conclusory statement of obviousness provided by the Examiner, that the Examiner in combining Edler and Mallinckrodt has simply undertaken a hindsight-based piecemeal reconstruction of the claimed invention based on the disclosure provided by Applicants. Such an approach is improper.

In view of the above, Applicants believe that claims 1-46 are in condition for allowance, and respectfully request withdrawal of the §102(e) and §103(a) rejections.

As indicated above, a Notice of Appeal is submitted concurrently herewith.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Joseph B. Ryan". The signature is fluid and cursive, with the first name "Joseph" and last name "Ryan" clearly distinguishable.

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Enclosure(s): Notice of Appeal